

VII. COMPLIANCE AND ENFORCEMENT HISTORY

Background

To date, EPA has focused much of its attention on measuring compliance with specific environmental statutes. This approach allows the Agency to track compliance with the Clean Air Act, the Resource Conservation and Recovery Act, the Clean Water Act, and other environmental statutes. Within the last several years, the Agency has begun to supplement single-media compliance indicators with facility-specific, multimedia indicators of compliance. In doing so, EPA is in a better position to track compliance with all statutes at the facility level, and within specific industrial sectors.

A major step in building the capacity to compile multimedia data for industrial sectors was the creation of EPA's Integrated Data for Enforcement Analysis (IDEA) system. IDEA has the capacity to "read into" the Agency's single-media databases, extract compliance records, and match the records to individual facilities. The IDEA system can match Air, Water, Waste, Toxics/Pesticides/EPCRA, TRI, and Enforcement Docket records for a given facility, and generate a list of historical permit, inspection, and enforcement activity. IDEA also has the capability to analyze data by geographic area and corporate holder. As the capacity to generate multimedia compliance data improves, EPA will make available more in-depth compliance and enforcement information. Additionally, sector-specific measures of success for compliance assistance efforts are under development.

Compliance and Enforcement Profile Description

Using inspection, violation, and enforcement data from the IDEA system, this section provides information regarding the historical compliance and enforcement activity of this sector. In order to mirror the facility universe reported in the Toxic Chemical Profile, the data reported within this section consists of records only from the TRI reporting universe. With this decision, the selection criteria are consistent across sectors with certain exceptions. For the sectors that do not normally report to the TRI program, data have been provided from EPA's Facility Indexing System (FINDS) which tracks facilities in all media databases. Please note, in this section, EPA does not attempt to define the actual number of facilities that fall within each sector. Instead, the section portrays the records of a subset of facilities within the sector that are well defined within EPA databases.

As a check on the relative size of the full sector universe, most notebooks contain an estimated number of facilities within the sector according to the Bureau of Census (See Section II). With sectors dominated by small businesses, such as metal finishers and printers, the reporting universe within the EPA databases may

be small in comparison to Census data. However, the group selected for inclusion in this data analysis section should be consistent with this sector's general make-up.

Following this introduction is a list defining each data column presented within this section. These values represent a retrospective summary of inspections and enforcement actions, and solely reflect EPA, State, and local compliance assurance activities that have been entered into EPA databases. To identify any changes in trends, the EPA ran two data queries, one for the past five calendar years (August 10, 1990 to August 9, 1995) and the other for the most recent twelve-month period (August 10, 1994 to August 9, 1995). The five-year analysis gives an average level of activity for that period for comparison to the more recent activity.

Because most inspections focus on single-media requirements, the data queries presented in this section are taken from single media databases. These databases do not provide data on whether inspections are State/local or EPA-led. However, the table breaking down the universe of violations does give the reader a crude measurement of the EPA's and States' efforts within each media program. The presented data illustrate the variations across regions for certain sectors.² This variation may be attributable to State/local data entry variations, specific geographic concentrations, proximity to population centers, sensitive ecosystems, highly toxic chemicals used in production, or historical noncompliance. Hence, the exhibited data do not rank regional performance or necessarily reflect which regions may have the most compliance problems.

Compliance and Enforcement Data Definitions

General Definitions

Facility Indexing System (FINDS) -- this system assigns a common facility number to EPA single-media permit records. The FINDS identification number allows EPA to compile and review all permit, compliance, enforcement, and pollutant release data for any given regulated facility.

Integrated Data for Enforcement Analysis (IDEA) -- is a data integration system that can retrieve information from the major EPA program office databases. IDEA uses the FINDS identification number to "glue together" separate data records from EPA's databases. This is done to create a "master list" of data records for any given facility. Some of the data systems accessible through IDEA are: AIRS (Air Facility Indexing and Retrieval System, Office of Air and Radiation), PCS (Permit Compliance System, Office of Water), RCRIS (Resource Conservation and Recovery Information System, Office of Solid Waste), NCDB (National Compliance Data Base, Office of Prevention, Pesticides, and Toxic Substances), CERCLIS (Comprehensive Environmental and Liability Information

System, Superfund), and TRIS (Toxic Release Inventory System). IDEA also contains information from outside sources such as Dun and Bradstreet and the Occupational Safety and Health Administration (OSHA). Most data queries displayed in notebook Sections IV and VII were conducted using IDEA.

Data Table Column Heading Definitions

Facilities in Search -- are based on the universe of TRI reporters within the listed SIC code range. For industries not covered under TRI reporting requirements, the notebook uses the FINDS universe for executing data queries. The SIC code range selected for each search is defined by each notebook's selected SIC code coverage described in Section II.

Facilities Inspected --- indicates the level of EPA and State agency facility inspections for the facilities in this data search. These values show what percentage of the facility universe is inspected in a 12 or 60 month period. This column does not count non-inspectional compliance activities such as the review of facility-reported discharge reports.

Number of Inspections -- measures the total number of inspections conducted in this sector. An inspection event is counted each time it is entered into a single media database.

Average Time Between Inspections -- provides an average length of time, expressed in months, that a compliance inspection occurs at a facility within the defined universe.

Facilities with One or More Enforcement Actions -- expresses the number of facilities that were party to at least one enforcement action within the defined time period. This category is broken down further into Federal and State actions. Data are obtained for administrative, civil/judicial, and criminal enforcement actions. Administrative actions include Notices of Violation (NOVs). A facility with multiple enforcement actions is only counted once in this column (facility with 3 enforcement actions counts as 1). All percentages that appear are referenced to the number of facilities inspected.

Total Enforcement Actions -- describes the total number of enforcement actions identified for an industrial sector across all environmental statutes. A facility with multiple enforcement actions is counted multiple times (a facility with 3 enforcement actions counts as 3).

State Lead Actions -- shows what percentage of the total enforcement actions are taken by State and local environmental agencies. Varying levels of use by States of EPA data systems may limit the volume of actions accorded State enforcement activity. Some States extensively report enforcement activities into EPA data

systems, while other States may use their own data systems.

Federal Lead Actions -- shows what percentage of the total enforcement actions are taken by the U.S. EPA. This value includes referrals from State agencies. Many of these actions result from coordinated or joint State/Federal efforts.

Enforcement to Inspection Rate -- expresses how often enforcement actions result from inspections. This value is a ratio of enforcement actions to inspections, and is presented for comparative purposes only. This measure is a rough indicator of the relationship between inspections and enforcement. This measure simply indicates historically how many enforcement actions can be attributed to inspection activity. Related inspections and enforcement actions under the Clean Water Act (PCS), the Clean Air Act (AFS) and the Resource Conservation and Recovery Act (RCRA) are included in this ratio. Inspections and actions from the TSCA/FIFRA/EPCRA database are not factored into this ratio because most of the actions taken under these programs are not the result of facility inspections. This ratio does not account for enforcement actions arising from non-inspection compliance monitoring activities (e.g., self-reported water discharges) that can result in enforcement action within the CAA, CWA and RCRA.

Facilities with One or More Violations Identified -- indicates the number and percentage of inspected facilities having a violation identified in one of the following data categories: In Violation or Significant Violation Status (CAA); Reportable Noncompliance, Current Year Noncompliance, Significant Noncompliance (CWA); Noncompliance and Significant Noncompliance (FIFRA, TSCA, and EPCRA); Unresolved Violation and Unresolved High Priority Violation (RCRA). The values presented for this column reflect the extent of noncompliance within the measured time frame, but do not distinguish between the severity of the noncompliance. Percentages within this column can exceed 100 percent because facilities can be in violation status without being inspected. Violation status may be a precursor to an enforcement action, but does not necessarily indicate that an enforcement action will occur.

Media Breakdown of Enforcement Actions and Inspections -- four columns identify the proportion of total inspections and enforcement actions within EPA Air, Water, Waste, and TSCA/FIFRA/EPCRA databases. Each column is a percentage of either the "Total Inspections," or the "Total Actions" column.

VII.A. Lumber and Wood Products Industry Compliance History

Exhibit 23 provides a Regional breakdown of the five-year enforcement and compliance activities for the lumber and wood products industry. Region IV conducted almost 50 percent of the inspections of lumber and wood product

manufacturing facilities performed in the U.S. This large percentage is due to the concentration of lumber and wood product manufacturers in the Southeastern U.S. The exhibit also indicates that 100 percent of the enforcement actions in Regions II and VII were lead by the State while 100 percent of the enforcement actions in Region VIII were lead by EPA.

Exhibit 23**Five Year Enforcement and Compliance Summary for the Lumber and Wood Industry**

A	B	C	D	E	F	G	H	I	J
Lumber and Wood SIC 24	Facilities in Search	Facilities Inspected	Number of Inspections	Average Number of Months Between Inspections	Facilities w/one or more Enforcement Actions	Total Enforcement Actions	State Lead Actions	Federal Lead Actions	Enforcement to Inspection Rate
Region I	11	9	29	24	4	3	0%	100%	0.10
Region II	13	11	49	17	1	6	100%	0%	0.12
Region III	60	40	276	14	11	25	88%	12%	0.09
Region IV	189	123	1,072	11	40	105	88%	12%	0.10
Region V	74	44	203	23	14	29	59%	41%	0.14
Region VI	67	39	239	18	23	59	80%	20%	0.25
Region VII	5	4	31	10	2	2	100%	0%	0.06
Region VIII	12	6	32	24	2	0	0%	0%	0
Region IX	26	20	126	13	9	19	58%	42%	0.15
Region X	37	27	120	19	7	10	60%	40%	0.08
Total/Average	494	323	2,177	14	113	258	79%	21%	0.12

VII.B. Comparison of Enforcement Activity Between Selected Industries

Exhibits 24-27 contain summaries of the one and five year enforcement and compliance activities for the lumber and wood products industry, as well as for other selected industries. As indicated in Exhibits 24 and 25, the lumber and wood products industry has an average enforcement to inspection rate compared to other industries. Exhibits 26 and 27 provide a breakdown of inspection and enforcement activities by statute. Of all inspections of lumber and wood products industry facilities, approximately 59 percent were performed under the Resource Conservation and Recovery Act, while approximately 31 percent were conducted under the Clean Air Act. The large percentages of RCRA and CAA inspections for this industry are due in part to facility construction requirements for wood preserving facilities under RCRA, and emissions standards under CAA.

Exhibit 24
Five Year Enforcement and Compliance Summary for Selected Industries

A	B	C	D	E	F	G	H	I	J
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Average Number of Months Between Inspections	Facilities w/One or More Enforcement Actions	Total Enforcement Actions	State Lead Actions	Federal Lead Actions	Enforcement to Inspection Rate
Metal Mining	873	339	1,519	34	67	155	47%	53%	0.10
Non-metallic Mineral Mining	1,143	631	3,422	20	84	192	76%	24%	0.06
Lumber and Wood	464	301	1,891	15	78	232	79%	21%	0.12
Furniture	293	213	1,534	11	34	91	91%	9%	0.06
Rubber and Plastic	1,665	739	3,386	30	146	391	78%	22%	0.12
Stone, Clay, and Glass	468	268	2,475	11	73	301	70%	30%	0.12
Nonferrous Metals	844	474	3,097	16	145	470	76%	24%	0.15
Fabricated Metal	2,346	1,340	5,509	26	280	840	80%	20%	0.15
Electronics/Computers	405	222	777	31	68	212	79%	21%	0.27
Motor Vehicle Assembly	598	390	2,216	16	81	240	80%	20%	0.11
Pulp and Paper	306	265	3,766	5	115	502	78%	22%	0.13
Printing	4,106	1,035	4,723	52	176	514	85%	15%	0.11
Inorganic Chemicals	548	298	3,034	11	99	402	76%	24%	0.13
Organic Chemicals	412	316	3,864	6	152	726	66%	34%	0.19
Petroleum Refining	156	145	3,257	3	110	797	66%	34%	0.25
Iron and Steel	374	275	3,555	6	115	499	72%	28%	0.14
Dry Cleaning	933	245	633	88	29	103	99%	1%	0.16

Exhibit 25
One Year Enforcement and Compliance Summary for Selected Industries

A	B	C	D	E		F		G	H
Industry Sector	Facilities in Search	Facilities Inspected	Number of Inspections	Facilities w/One or More Violations		Facilities w/One or More Enforcement Actions		Total Enforcement Actions	Enforcement to Inspection Rate
				Number	Percent*	Number	Percent*		
Metal Mining	873	114	194	82	72%	16	14%	24	0.13
Non-metallic Mineral Mining	1,143	253	425	75	30%	28	11%	54	0.13
Lumber and Wood	464	142	268	109	77%	18	13%	42	0.15
Furniture	293	160	113	66	41%	3	2%	5	0.04
Rubber and Plastic	1,665	271	435	289	107%	19	7%	59	0.14
Stone, Clay, and Glass	468	146	330	116	79%	20	14%	66	0.20
Nonferrous Metals	844	202	402	282	140%	22	11%	72	0.18
Fabricated Metal	2,346	477	746	525	110%	46	10%	114	0.15
Electronics/Computers	405	60	87	80	133%	8	13%	21	0.24
Motor Vehicle Assembly	598	169	284	162	96%	14	8%	28	0.10
Pulp and Paper	306	189	576	162	86%	28	15%	88	0.15
Printing	4,106	397	676	251	63%	25	6%	72	0.11
Inorganic Chemicals	548	158	427	167	106%	19	12%	49	0.12
Organic Chemicals	412	195	545	197	101%	39	20%	118	0.22
Petroleum Refining	156	109	437	109	100%	39	36%	114	0.26
Iron and Steel	374	167	488	165	99%	20	12%	46	0.09
Dry Cleaning	933	80	111	21	26%	5	6%	11	0.10
*Percentages in Columns E and F are based on the number of facilities inspected (Column C). Percentages can exceed 100% because violations and actions can occur without a facility inspection.									

Exhibit 26
Five Year Inspection and Enforcement Summary by Statute for Selected Industries

Industry Sector	Number of Facilities Inspected	Total Inspections	Enforcement Actions	Clean Air Act		Clean Water Act		Resource Conservation and Recovery Act		FIFRA/TSCA ₆ /EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Metal Mining	339	1,519	155	35%	17%	57%	60%	6%	14%	1%	9%
Non-metallic Mineral Mining	631	3,422	192	65%	46%	31%	24%	3%	27%	<1%	4%
Lumber and Wood	301	1,891	232	31%	21%	8%	7%	59%	67%	2%	5%
Furniture	293	1,534	91	52%	27%	1%	1%	45%	64%	1%	8%
Rubber and Plastic	739	3,386	391	39%	15%	13%	7%	44%	68%	3%	10%
Stone, Clay and Glass	268	2,475	301	45%	39%	15%	5%	39%	51%	2%	5%
Nonferrous Metals	474	3,097	470	36%	22%	22%	13%	38%	54%	4%	10%
Fabricated Metal	1,340	5,509	840	25%	11%	15%	6%	56%	76%	4%	7%
Electronics/Computers	222	777	212	16%	2%	14%	3%	66%	90%	3%	5%
Motor Vehicle Assembly	390	2,216	240	35%	15%	9%	4%	54%	75%	2%	6%
Pulp and Paper	265	3,766	502	51%	48%	38%	30%	9%	18%	2%	3%
Printing	1,035	4,723	514	49%	31%	6%	3%	43%	62%	2%	4%
Inorganic Chemicals	302	3,034	402	29%	26%	29%	17%	39%	53%	3%	4%
Organic Chemicals	316	3,864	726	33%	30%	16%	21%	46%	44%	5%	5%
Petroleum Refining	145	3,237	797	44%	32%	19%	12%	35%	52%	2%	5%
Iron and Steel	275	3,555	499	32%	20%	30%	18%	37%	58%	2%	5%
Dry Cleaning	245	633	103	15%	1%	3%	4%	83%	93%	<1%	1%

*

Actions taken to enforce the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances and Control Act, and the Emergency Planning and Community Right-to-Know Act as well as other Federal environmental laws.

Exhibit 27
One Year Inspection and Enforcement Summary by Statute for Selected Industries

Industry Sector	Number of Facilities Inspected	Total Inspections	Enforcement Actions	Clean Air Act		Clean Water Act		Resource Conservation and Recovery Act		FIFRA/TSCA/EPCRA/Other	
				% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions	% of Total Inspections	% of Total Actions
Metal Mining	114	194	24	47%	42%	43%	34%	10%	6%	<1%	19%
Non-metallic Mineral Mining	253	425	54	69%	58%	26%	16%	5%	16%	<1%	11%
Lumber and Wood	142	268	42	29%	20%	8%	13%	63%	61%	<1%	6%
Furniture	293	160	5	58%	67%	1%	10%	41%	10%	<1%	13%
Rubber and Plastic	271	435	59	39%	14%	14%	4%	46%	71%	1%	11%
Stone, Clay, and Glass	146	330	66	45%	52%	18%	8%	38%	37%	<1%	3%
Nonferrous Metals	202	402	72	33%	24%	21%	3%	44%	69%	1%	4%
Fabricated Metal	477	746	114	25%	14%	14%	8%	61%	77%	<1%	2%
Electronics/Computers	60	87	21	17%	2%	14%	7%	69%	87%	<1%	4%
Motor Vehicle Assembly	169	284	28	34%	16%	10%	9%	56%	69%	1%	6%
Pulp and Paper	189	576	88	56%	69%	35%	21%	10%	7%	<1%	3%
Printing	397	676	72	50%	27%	5%	3%	44%	66%	<1%	4%
Inorganic Chemicals	158	427	49	26%	38%	29%	21%	45%	36%	<1%	6%
Organic Chemicals	195	545	118	36%	34%	13%	16%	50%	49%	1%	1%
Petroleum Refining	109	439	114	50%	31%	19%	16%	30%	47%	1%	6%
Iron and Steel	167	488	46	29%	18%	35%	26%	36%	50%	<1%	6%
Dry Cleaning	80	111	11	21%	4%	1%	22%	78%	67%	<1%	7%

* Actions taken to enforce the Federal Insecticide, Fungicide, and Rodenticide Act; the Toxic Substances and Control Act, and the Emergency Planning and Community Right-to-Know Act as well as other Federal environmental laws.

VII.C. Review of Major Legal Actions

VII.C.1. Review of Major Cases

This section provides summary information about major cases that have affected this sector. As indicated in EPA's *Enforcement Accomplishments Report, FY 1991, FY 1992, FY 1993* publications, nine significant enforcement cases were resolved between 1991 and 1993 for the lumber and wood products industry. CAA violations comprised four of these cases, the most of any statute. The remaining cases were distributed fairly evenly, with CERCLA cited twice, RCRA cited twice, and FIFRA cited once.

Three of the CAA violations involved excessive hog fuel (waste wood) boiler emissions. Each of these settlements include Supplemental Environmental Projects (SEPs), such as the installation of boiler precipitators, and penalties were usually under \$100,000. A notable exception, however, is *U.S. v. Louisiana-Pacific Corporation and Kirby Forest Industries* (1993). The case involved numerous violations of State Implementation Plans, Prevention of Significant Deterioration requirements, New Source Review requirements, and State permit requirements at its Louisiana-Pacific facilities. The penalty assessed in this case represents the largest CAA civil penalty ever collected by EPA, and the second largest penalty recovered under any environmental statute. Under the terms of a consent decree, Louisiana-Pacific was required to pay \$11.1 million in civil penalties and was required to install state-of-the-art pollution control equipment valued at \$70 million.

The remaining enforcement actions (under CERCLA, RCRA, and FIFRA) involved sites with contamination caused by wood treatment processes. Penalties assessed against responsible parties at these sites ranged from \$68,000 to \$350,000. In addition, a CERCLA settlement at the Koppers NPL site required Beazer East, Inc. to perform design, construction, operation, and maintenance of an operable unit valued at approximately \$77 million.

VII.C.2. Supplemental Environmental Projects (SEPs)

Supplementary Environmental Projects (SEPs) are compliance agreements that reduce a facility's stipulated penalty in return for an environmental project that exceeds the value of the reduction. Often, these projects fund pollution prevention activities that can significantly reduce the future pollutant loadings of a facility.

In December, 1993, the Regions were asked by EPA's Office of Enforcement to provide information on the number and type of SEPs entered into by the Regions. Exhibit 28 contains a representative sample of the Regional responses addressing the lumber and wood products industry. The information contained in the chart is not comprehensive and provides only a sample of the types of SEPs developed for the lumber and wood products industry.

Exhibit 28 Supplemental Environmental Projects

Case Name	EPA Region	Statute/ Type of Action	Type of SEP	Estimated Cost to Company	Expected Environmental Benefits	Final Assessed Penalty	Final Penalty After Mitigation
Louisiana-Pacific Corporation Moyie Springs, ID	10	CAA-SIP	Pollution Reduction	\$ 102,950	Installation of electrified filter bed to reduce particulate emissions.	\$ 67,972	\$ 33,986
Merritt Brothers Lumber Company Priest River, ID	10	CAA-SIP	Pollution Reduction	\$ 213,881	Installation of electrostatic precipitator to reduce particulate emissions.	\$ 20,208	\$ 10,104
Rosboro Lumber Company Springfield, OR	10	TSCA	Pollution Reduction	\$ 37,230	Early disposal of PCB and PCB-contaminated electrical equipment.	\$ 37,230	\$ 18,615
JD Lumber, Inc. Priest River, ID	10	CAA-SIP	Pollution Prevention	\$ 58,000	Purchase and installation of "hog" machine to reduce particulate emissions.	\$ 17,500	\$ 8,750
Riley Creek Lumber Company Laclede, ID	10	CAA-SIP	Pollution Reduction	\$ 254,000	Purchase and installation of electrostatic precipitator to reduce particulate emissions.	\$ 20,000	\$ 10,000
Georgia Pacific Zachary, LA	6	CERCLA	Equipment Donation	\$ 6,000	Donate emergency and/or computer equipment to the Local Emergency Planning Committee (LEPC) to respond to and/or plan for chemical emergencies. Participate in LEPC activities.	\$ 25,000	\$ 5,000

VIII. COMPLIANCE ACTIVITIES AND INITIATIVES

This section highlights the activities undertaken by this industry sector and public agencies to voluntarily improve the sector's environmental performance. These activities include those independently initiated by industrial trade associations. In this section, the notebook also contains a listing and description of national and regional trade associations.

VIII.A. Sector-Related Environmental Programs and Initiatives

EPA Region X conducted the "Idaho Rule Effectiveness Study" from March 1991 through October 1992 in the Idaho Panhandle. The study focused on sources of PM and was designed to evaluate the effectiveness of Idaho rules regulating particulate emissions: the sources selected for the study, which included many wood products facilities, were located in or near suspected PM10 non-attainment areas. Inspections evaluated the compliance status of 26 sources with respect to Idaho rules concerning emissions limitations, visible emissions limitations for wigwam burners, permits to construct, operating permits, and particulate standards for combustion sources.

EPA's impression following completion of the study was that existing controls were not adequate to comply with applicable regulations. A majority of sources used multiclones as their primary control device. Equipment was not routinely maintained; sources did not appear to have a routine operation and maintenance program (O&M); and many mill managers had little knowledge of the air quality regulations that applied to their facility.

A second conclusion reached by EPA was that environmental responsibilities were secondary to those related to the operation of the mill. Even at the largest facilities, the manager of the mill was also responsible for environmental compliance and reported to a production-oriented management structure.

The study resulted in the following actions and lessons learned:

- Five facilities installed air pollution control equipment that will permanently reduce PM10 emissions by 415 tons/year. These installations were in response to enforcement actions issued by the Region during the study. Two additional facilities eliminated wood waste incineration entirely, reducing PM10 emissions by over 250 tons/year;
- General industry awareness of environmental regulations has been improved substantially as a result of the initiated inspections, subsequent enforcement actions, and meetings with EPA;

- It is important for a regulatory agency to conduct unannounced inspections;
- After meeting with EPA, an industry group sponsored an opacity certification school in October 1991 which was attended by numerous industry representatives. Additional certifications have been held each April and October since then;
- The problem of wood waste disposal is not only an air quality problem. Resolution of the enforcement cases developed in this study showed that recognition should be given to multimedia environmental impacts;
- Most of the sources will need to obtain operating permits.

VIII.B. EPA Voluntary Programs

33/50 Program

The "33/50 Program" is EPA's voluntary program to reduce toxic chemical releases and transfers of 17 chemicals from manufacturing facilities. Participating companies pledge to reduce their toxic chemical releases and transfers by 33 percent as of 1992 and by 50 percent as of 1995 from the 1988 baseline year. Certificates of Appreciation have been given to participants who met their 1992 goals. The list of chemicals includes 17 high-use chemicals reported in the Toxics Release Inventory.

Twenty-four companies and 43 facilities listed under SIC 24 (lumber and wood products) are currently participating in the 33/50 program. They account for approximately nine percent of the 491 companies under SIC 24. This is lower than the average for all industries of 14 percent participation. (Contact: Mike Burns 202-260-6394 or the 33/50 Program 202-260-6907)

Exhibit 29 lists those companies participating in the 33/50 program that reported under SIC code 24 to TRI. Many of the participating companies listed multiple SIC codes (in no particular order), and are therefore likely to conduct operations in addition to Lumber and Wood Products manufacturing. The table shows the number of facilities within each company that are participating in the 33/50 program; each company's total 1993 releases and transfers of 33/50 chemicals; and the percent reduction in these chemicals since 1988.

Exhibit 29
Lumber and Wood Facilities Participating in the 33/50 Program

Parent Facility Name	Parent City	ST	SIC Codes	# of	1993 Releases	% Reduction
Blue Circle America Inc	Marietta	GA	2491	1	250	*
C. M. Tucker Lumber Corp.	Pageland	SC	2491	2	1,000	*
Elco Forest Products Inc	Opelousas	LA	2491	1	0	75
Flagship Trading Corp	Cleveland	OH	2491	1	250	***
Georgia-Pacific Corporation	Atlanta	GA	2493	3	2,722,182	50
Hagerwood Inc	Grand Rapids	MI	2491	2	1,000	*
Honolulu Wood Treating Co.	Ewa Beach	HI	2491	1	256	50
Hutchens Industries Inc	Springfield	MO	3799, 3325, 2421	1	298,000	68
International Paper Company	Purchase	NY	2435	5	2,784,831	50
Julian Lumber Co Inc	Antlers	OK	2491	1	250	50
Louisiana-Pacific Corporation	Portland	OR	2421, 2435	5	294,823	50
Mascotech	Taylor	MI	2426	1	3,163,830	35
Potlatch Corporation	San Francisco	CA	2431, 2426	2	276,643	60
Premark International Inc	Deerfield	IL	2436	3	140,313	***
R L C Industries Co	Dillard	OR	2435, 2436	1	129,083	48
States Industries Inc	Eugene	OR	2435	1	16,272	50
Tarkett North Amercn	Parsippany	NJ	2426	1	30,190	35
Taylor-Ramsey Corporation	Madison Heights	VA	2491	1	255	***
Thrift Brothers Lumber Co Inc	Westminster	SC	2491	1	510	*
Tri-State Pole & Piling Inc	Lucedale	MS	2491	1	71,255	*
Union Camp Corporation	Wayne	NJ	2611,	1	835,696	50
Weyerhaeuser Company	Tacoma	WA	2491	5	1,006,356	*
Willamette Industries Inc	Portland	OR	2493	1	677,090	34
Wood Preservers Inc	Warsaw	VA	2491	1	31	50
* = not quantifiable against 1988						

Environmental Leadership Program

The Environmental Leadership Program (ELP) is a national initiative piloted by EPA and State agencies in which facilities have volunteered to demonstrate innovative approaches to environmental management and compliance. EPA has selected 12 pilot projects at industrial facilities and Federal installations which will demonstrate the principles of the ELP program. These principles include: environmental management systems, multimedia compliance assurance, third-party verification of compliance, public measures of accountability, community involvement, and mentoring programs. In return for participating, pilot participants receive public recognition and are given a period of time to correct any violations discovered during these experimental projects. (Contact: Tai-ming Chang, ELP Director, 202-564-5081 or Robert Fentress, 202-564-7023)

Project XL

Project XL was initiated in March 1995 as a part of President Clinton's *Reinventing Environmental Regulation* initiative. The projects seek to achieve cost effective environmental benefits by allowing participants to replace or modify existing regulatory requirements on the condition that they produce greater environmental benefits. EPA and program participants will negotiate and sign a Final Project Agreement, detailing specific objectives that the regulated entity shall satisfy. In exchange, EPA will allow the participant a certain degree of regulatory flexibility and may seek changes in underlying regulations or statutes. Participants are encouraged to seek stakeholder support from local governments, businesses, and environmental groups. EPA hopes to implement fifty pilot projects in four categories including facilities, sectors, communities, and government agencies regulated by EPA. Applications will be accepted on a rolling basis and projects will move to implementation within six months of their selection. For additional information regarding XL Projects, including application procedures and criteria, see the May 23, 1995 Federal Register Notice, or contact Jon Kessler at EPA's Office of Policy Analysis (202) 260-4034.

Green Lights Program

EPA's Green Lights program was initiated in 1991 and has the goal of preventing pollution by encouraging U.S. institutions to use energy-efficient lighting technologies. The program has over 1,500 participants which include major corporations; small and medium sized businesses; Federal, State and local governments; non-profit groups; schools; universities; and health care facilities. Each participant is required to survey their facilities and upgrade lighting wherever it is profitable. EPA provides technical assistance to the participants through a decision support software package, workshops and manuals, and a financing registry. EPA's Office of Air and Radiation is responsible for operating the Green

Lights Program. (Contact: Susan Bullard at 202-233-9065 or the Green Light/Energy Star Hotline at 202-775-6650)

WasteWi\$e Program

The WasteWi\$e Program was started in 1994 by EPA's Office of Solid Waste and Emergency Response. The program is aimed at reducing municipal solid wastes by promoting waste minimization, recycling collection, and the manufacturing and purchase of recycled products. As of 1994, the program had about 300 companies as members, including a number of major corporations. Members agree to identify and implement actions to reduce their solid wastes and must provide EPA with their waste reduction goals along with yearly progress reports. EPA in turn provides technical assistance to member companies and allows the use of the WasteWi\$e logo for promotional purposes. (Contact: Lynda Wynn, 202-260-0700 or the WasteWi\$e Hotline at 1-800-372-9473)

Climate Wise Recognition Program

The Climate Change Action Plan was initiated in response to the U.S. commitment to reduce greenhouse gas emissions in accordance with the Climate Change Convention of the 1990 Earth Summit. As part of the Climate Change Action Plan, the Climate Wise Recognition Program is a partnership initiative run jointly by EPA and the Department of Energy. The program is designed to reduce greenhouse gas emissions by encouraging reductions across all sectors of the economy, encouraging participation in the full range of Climate Change Action Plan initiatives, and fostering innovation. Participants in the program are required to identify and commit to actions that reduce greenhouse gas emissions. The program, in turn, gives organizations early recognition for their reduction commitments; provides technical assistance through consulting services, workshops, and guides; and provides access to the program's centralized information system. At EPA, the program is operated by the Air and Energy Policy Division within the Office of Policy Planning and Evaluation. (Contact: Pamela Herman, 202-260-4407)

NICE³

The U.S. Department of Energy and EPA's Office of Pollution Prevention are jointly administering a grant program called The National Industrial Competitiveness through Energy, Environment, and Economics (NICE³). By providing grants of up to 50 percent of the total project cost, the program encourages industry to reduce industrial waste at its source and become more energy-efficient and cost-competitive through waste minimization efforts. Grants are used by industry to design, test, demonstrate, and assess the feasibility of new processes and/or equipment with the potential to reduce pollution and increase energy efficiency. The program is open to all industries; however, priority is given to proposals from participants in the pulp and paper, chemicals, primary metals, and petroleum and coal products sectors. (Contact: DOE's Golden Field Office, 303-275-4729)

VIII.C. Trade Association/Industry Sponsored Activity**VIII.C.1. Environmental Programs**

A consortium of Universities, DOE National Laboratories, Forest Service Researchers, and Industrial partners have submitted a coordinated package of proposals for funding under EPA's "Environmental Technology Initiative" (ETI) program aimed at reducing pollution in wood products production. A total of five proposals were submitted, including: "Diffusion of Pollution Prevention Technology for the Lumber and Wood Products Industry," "Process Control Technology to Mitigate VOC Air Emissions in the Production of Oriented Strand Board," "Improved Wood Adhesives for Reduction of Pollutants for the Wood Panel Manufacturing Industry," "Identification and Quantification of Volatile Organic Compounds Emitted from Lumber Dry Kilns," and "Development of Coupled Biological/Chemical Systems to Reduce VOCs in Lumber and Composite Board Facilities." These projects are currently underway at the Forest Products Laboratory in Madison, Wisconsin.

To explore questions related to potential technologies which might be applicable for control of wood panel plant VOC emissions, the American Forest & Paper Association (AF&PA) Solid Wood Committee and NCASI hosted a workshop in October 1993. It was attended by approximately 100 individuals from industry, State regulatory agencies, EPA, and EPA consultants. At the workshop, the following five control technologies were discussed: ultraviolet oxidation, chemical scrubbing with brominated compounds, furnish dryer exhaust gas recirculation to a wood-fired fuel cell for oxidation of organic compounds, biofiltration, and regenerative thermal oxidation. Topics discussed included: current status of development, performance, problems encountered, potential limitations, energy requirements, and estimated costs. In addition, an EPA representative updated the

workshop attendees on the Agency's current efforts to develop a common definition of VOCs and to adopt a standard VOC test method for emissions from solid wood manufacturing plants.

According to the American Forest and Paper Association, wood recycling is on the rise. An estimated 400,000 tons of wood waste were recovered in 1990. This waste included barrels, boxes, brush, Christmas trees, construction and demolition waste, crates, pallets, posts, poles, prunings, railroad ties, sawdust, slab wood, and yard trimmings. The management of wood residue as a component of construction and demolition waste and from urban tree removals is becoming a larger issue as landfill tipping fees rise. Wood residue management is also an increasingly important issue for wood products producers, retailers, and the general public. As virgin wood fiber prices rise, incentives and cost-avoidance pressures are motivating wood users and producers to find ways to fully and most profitably utilize this resource.

The American Forest and Paper Association's American Wood Council is producing a Wood Recycling Reference Handbook to encourage and facilitate wood recycling in the United States. The book will list by state and county where wood residue can be bought for reuse and recycling. The first edition is due out in October, 1995.

VIII.C.2. Summary of Trade Associations

There are numerous trade and professional organizations affiliated with the forest products industry. The largest organization is the American Forest and Paper Association. The smaller associations generally focus on specific types of timber (i.e., hardwoods, pine), or specific types of product (i.e., plywood, particleboard). In addition, there are a number of trade organizations which focus their efforts on specific regions of the country.

General

American Forest and Paper Association 1111 19th Street, NW, Suite 800 Washington, DC 20036 Phone: (202) 463-2700 Fax: (202) 463-2785	Members: 425 Contact: Josephine Cooper
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The American Forest and Paper Association (AF&PA) is the national trade association of the forest, pulp, paper, paperboard, and wood products industry. AF&PA represents approximately 500 member companies and related trade associations (whose memberships are in the thousands) which grow, harvest, and process wood and wood fiber; manufacture pulp, paper and paperboard products from both virgin and recovered fiber; and produce solid wood products.

National Council of the Paper Industry for Air and Stream Improvement 260 Madison Avenue New York, NY 10016 Phone: (212) 532-9000 Fax: (212) 779-2849	Members: 100 Staff: 90 Budget: \$10,000,000 Contact: Dr. Ronald Yeske, President
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Founded in 1943, the National Council of the Paper Industry for Air and Stream Improvement (NCASI) presently conducts research on environmental problems related to industrial forestry and the manufacture of pulp, paper, and wood products. NCASI produces technical documents on environmental issues facing the pulp and paper industry and conducts industry conferences. Publications include: a biweekly bulletin on general issues and a variety of technical bulletins (40/year). NCASI also holds an annual March convention in New York City.

Hardwood

Hardwood Manufactures Association 400 Penn Center Blvd. Pittsburgh, PA 15235 Phone: (412) 346-2222 Fax: (412) 346-2233	Members: 145 Staff: 5 Contact: Susan Regan
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Manufacturers of hardwood lumber and hardwood products. Conducts promotion programs; compiles statistics.

National Hardwood Lumber Association PO Box 34518 Memphis, TN 38184-0518 Phone: (901) 377-1818 Fax: (901) 382-6419	Members: 1300 Staff: 40 Contact: Ernest _J._Stebbins
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United States and Canadian hardwood lumber and veneer manufacturers, distributors, and consumers. Inspects, measures, and certifies hardwood lumber. Maintains inspection training school and conducts short courses at members' lumber yards; conducts management and marketing seminars for the hardwood industry. The organization publishes the National Hardwood Lumber Association-Annual Report and the National Hardwood News, an annual newsletter.

Plywood

Hardwood Plywood & Veneer Association 1825 Michael Faraday Dr. PO Box 2789 Reston, VA 22090 Phone: (703) 435-2537	Members: 150 Staff: 12 Budget: \$1,000,000 Contact: E.T. Altman
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Manufactures and prefinishers of hardwood plywood; manufacturers of veneer; suppliers of glue, machinery, and other products related to the industry. Conducts laboratory testing of plywood, adhesives, finishes, flamespread, formaldehyde emissions, structural, and smoke density. The association provides public relations, advertising, marketing, and technical services to members. It represents the industry in legislative matters and keep members informed on tariff and trade actions. Publications include the annual *Hardwood Plywood and Veneer News* and *The Executive Brief*.

American Plywood Association PO Box 11700 Tacoma, WA 98411 Phone: (206) 565-6600 Fax: (206) 565-7265	Members: 136 Staff: 180 Budget: \$14,000,000 Contact: Gene Zellner
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Manufacturers of plywood, oriented strand board and composites. Conducts trade promotion through advertising, publicity, merchandising, and field promotion. The Association provides quality oversight and conducts research to improve products, applications, and manufacturing techniques. Publications include the *Management Report*, and periodic *Plywood Statistics*.

Hardboard

American Hardboard Association 1210 W. Northwest Highway Palatine, IL 60067 Phone: (708) 934-8800 Fax: (708) 934-8803	Members: 4 Staff: Budget: Contact: C. Curtis Peterson
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Manufacturers representing major U.S. producers of hardboard.

Particleboard

National Particleboard Association 18928 Premiere Court Gaithersburg, MD 20879 Phone: (301) 670-0604 Fax: (301) 840-1252	Members: 19 Staff: 10 Budget: Contact: Richard Margosian
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Mat-formed wood particleboard and medium-density fiberboard manufacturers interested in establishing industry product standards with the American National Standards Institute and quality standards for performance. Sponsors educational programs and publishes promotional and technical bulletins on topics including laminating and veneering.

Wood Preserving

American Wood-Preservers' Association P.O. Box 286 Woodstock, MD 21163-0286 Phone: (410) 465-3169 Fax: (410) 465-3195	Members: 2000 Staff: Budget: Contact: John F. Hall
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The association includes processors and users of chemically treated wood and is affiliated with the American Wood Preservers Institute. Publications include the annual *AWPA Book of Standards*, which is a technical handbook covering preservatives and treatments.

American Wood Preservers Institute 1945 Old Gallows Road, Ste. 150 Vienna, VA 22182-3931 Phone: (703) 893-4005 Fax: (703) 893-8492	Members: 150 Staff: 8 Budget: \$1,100,000 Contact: Gene Bartlow
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The American Wood Preservers Institute is the national trade association representing the wood preserving industry. Its members include manufacturers of treated wood products, manufacturers and distributors of wood preservatives, and providers of allied services. AWPI provides technical forums for the industry, publishes a bi-monthly newsletter, and produces annual Industry Statistical Reports.

Regional

Northeastern Lumber Manufacturers Association 272 Tuttle Rd., Box 87A Cumberland Center, ME 04021 Phone: (207) 829-6901 Fax: (207) 829-4293	Members: 200 Staff: 7 Budget: Contact: Stephen Clark
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Northeastern Lumber Manufacturers is an association of hardwood and softwood lumber and timber products manufacturers in New England. The group promotes the interests of the Northeastern lumber manufacturing industry and presents the views of the industry to other organizations, the government, and the public. Publications include the monthly *Northeastern Lumber Manufacturers Association*.

Southeastern Lumber Manufacturers Association PO Box 1788 Forest Park, GA 30051 Phone: (404) 361-1445 Fax: (404) 361-5963	Members: 390 Staff: 10 Budget: \$2,000,000 Contact: Ed C. Cone, Jr.
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Represents Southeastern hardwood and softwood lumber manufacturers and coordinates efforts of membership to alleviate local, regional, and national problems that affect the regional lumber industry. Publishes a quarterly newsletter, Silva Magazine, and Management Update. SLMA also conducts technical workshops.

Southern Forest Products Association PO Box 52468 New Orleans, LA 70152 Phone: (504) 443-4464 Fax: (504) 443-6612	Members: 220 Staff: 31 Budget: \$2,856,000 Contact: Karl Lindberg
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The Southern Forest Products Association (SFPA) represents Southern pine lumber manufacturers and conducts market development and product promotional programs and government support activities. SFPA publishes a weekly newsletter covering a variety of industry activities.

Western Wood Preservers Institute 601 Main Street, Suite 405 Vancouver, WA 98660 Phone: (360) 693-9958 Fax: (360) 693-9958	Members: 50 Staff: 3 Budget: Contact: Dennis Hayward
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WWPI represents the treated wood industry in Western North America. WWPI provides educational information to assist consumers in the selection and proper, safe, and environmentally appropriate use of treated wood products.

Western Wood Products Association Yeon Building 522 SW 5th Ave. Portland, OR 97204-2122 Phone: (503) 224-3930 Fax: (503) 224-3934	Members: 250 Staff: 63 Budget: Contact: Robert Hunt
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WWPA is a rules-writing agency (for lumber grades), approved under the American Lumber Standard Committee under the jurisdiction of the Department of Commerce. The Association also provides economic and statistical information on the Western lumber industry, conducts research in wood technology, engineering and performance; provides technical and educational services both domestically and internationally; and published technical and consumer information for Western Lumber end-use.

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Contacts

Name	Organization	Telephone
Michael Caldwell	American Forest and Paper	202-463-2762
Albert Lukban	American Wood Preservers Institute	703-893-4005
Buddy Perry	Perry Builders	919-492-9171
Nicholas Latham	Natural Resources Defense Council	202-624-9363
Jim Yuhas	Western Wood Products	503-224-3930
Bill Wyndes	Louisiana-Pacific	707-443-7511
Mark Rivas	U.S. EPA, Region VII (inspector)	913-551-7669
Chris James	U.S. EPA, Region X (inspector)	206-553-1194
Maria Dixon	U.S. Bureau of the Census	301-763-5895
Kurt Bigbee	American Plywood Association	202-565-6600
John Pinkerton	NCASI	212-532-9047

¹ TOXNET is a computer system run by the National Library of Medicine that includes a number of toxicological databases managed by EPA, National Cancer Institute, and the National Institute for Occupational Safety and Health. For more information on TOXNET, contact the TOXNET help line at 1-800-231-3766. Databases included in TOXNET are: CCRIS (Chemical Carcinogenesis Research Information System), DART (Developmental and Reproductive Toxicity Database), DBIR (Directory of Biotechnology Information Resources), EMICBACK (Environmental Mutagen Information Center Backfile), GENE-TOX (Genetic Toxicology), HSDB (Hazardous Substances Data Bank), IRIS (Integrated Risk Information System), RTECS (Registry of Toxic Effects of Chemical Substances), and TRI (Toxic Chemical Release Inventory). HSDB contains chemical-specific information on manufacturing and use, chemical and physical properties, safety and handling, toxicity and biomedical effects, pharmacology, environmental fate and

exposure potential, exposure standards and regulations, monitoring and analysis methods, and additional references.

² EPA Regions include the following States: I (CT, MA, ME, RI, NH, VT); II (NJ, NY, PR, VI); III (DC, DE, MD, PA, VA, WV); IV (AL, FL, GA, KY, MS, NC, SC, TN); V (IL, IN, MI, MN, OH, WI); VI (AR, LA, NM, OK, TX); VII (IA, KS, MO, NE); VIII (CO, MT, ND, SD, UT, WY); IX (AZ, CA, HI, NV, Pacific Trust Territories); X (AK, ID, OR, WA).